

CONSIDERATIONS FOR DEVELOPERS OF OIL SHALE OR “OIL SANDS” PROJECTS IN THE UINTAH BASIN, UTAH

FUNDAMENTAL OIL SHALE AND OIL SANDS TECHNOLOGIES

- Oil Shale - Conversion of kerogen to petroleum liquids and gases by pyrolysis
- Oil Sand - Separation of bitumen (“tar”) from sandstone by heat, water, solvents
- Technologies are both established and under development for processing Utah oil shale and oil sands

SO....YOU HAVE LEASES AND A PROCESS.....

- Of course, you know you need environmental permits.....
- BUT FIRST !
 - Is your design complete through the pre-feasibility stage?
 - Are you engaged in the process of detailed design?
 - Do you have sufficient funding to complete your design work and carryout the permitting?
- IF NOT, you may not be ready to begin the permitting process

WHAT ARE THE BASELINE ENVIRONMENTAL CONDITIONS?

- Air Quality Resources
- Cultural (archeology) and Paleontological Resources
- Ground Water Characterization
- Surface Water Characterization
- Threatened & Endangered Species
- Vegetative Cover and Diversity
- Wildlife Habitat

WHY DOES KNOWING BASELINE CONDITIONS MATTER?

- It matters because you may not affect the environment beyond what is allowed by law and you must restore the terrain and habitat to meet an approved post-mining land use
- If you don't know what you started with, how can you demonstrate your project's impacts?

INQUIRING REGULATORS WANT TO KNOW..... ABOUT YOUR PROCESS

- “Trust Us, our process will perform as designed”
- “But our process is proprietary.....



REGULATORS ARE TOO POLITE TO SAY SO, BUT.....



- Yeah, and I've got this bridge.....

WHAT YOU NEED TO UNDERSTAND ABOUT YOUR PROPRIETARY TECHNOLOGY

- You must provide design information sufficient to demonstrate the technology and its effectiveness in meeting environmental regulatory standards
- To do that, you have to describe the process sufficiently to demonstrate that it will produce the products, bi-products and waste products you say it will produce and describe their characteristics.
- State agencies have provisions for maintaining confidentiality of information that is clearly marked “*Confidential*”



LAND POSITIONS

- All mineral rights for mining OS/OS resources must be leased from someone
- The current programmatic EIS for Oil Shale and Oil Sands Development does not allow commercial production on BLM-managed lands - *BUT, simply crossing BLM lands for access to other lands requires BLM ROW Grant*
- State lands managed by SITLA and fee lands (surface and minerals) are the remaining alternatives for commercial development

PERMITS

- Air
 - Federal Clean Air Act
 - Minor or Major Source?
 - Utah DAQ or, for Indian Country, U.S. EPA
- Water
 - Water Rights - Utah Div. of Water Rights
 - Federal Clean Water Act
 - Section 401 - Discharge to Waters of the U.S. - U.S. EPA or Utah DWQ
 - Dredge and Fill Waters of the U.S. - U.S. Army Corps of Engineers
 - Utah Water Quality Act - Utah DWQ
 - Ground Water Discharge Permit
 - Construction Permit
- Mining and Reclamation - Utah DOGM
- Land Use - BLM for most federal land, SITLA, and county governments
- Waste Management and Disposal
 - Depends on characteristics and source
 - County Governments, UDEQ, U.S. EPA

**IN CLOSING: PLAN AHEAD, SAVE YOUR
HEAD AND MAYBE YOUR PROJECT**

